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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,504	09/08/2003	Roger Lee Swensrud	03-389-US	1798
7590	02/18/2005		EXAMINER NGUYEN, HANH N	
Robert D. Kucler, Esq. Reed Smith LLP P.O. Box 488 Pittsburgh, PA 15230-0488			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/658,504

**Applicant(s)**

SWENSRUD ET AL.

**Examiner**

Nguyen N. Hanh

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 14-20 is/are rejected.
- 7) ☐ Claim(s) 7-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: "jumper strap 215" should be written as:--jumper block 215---.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: providing antecedent basis for "a first conductive layer", "a second conductive layer", "a third conductive layer", "a first dielectric layer", "a second dielectric layer", "a fourth conductive layer" as recited in claim 14.

### ***Drawings***

3. The drawings are objected to because "Fig. C" should be labeled as "Fig. 3C". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, it is not clear about the limitations: "a first conductive layer", "a second conductive layer", "a third conductive layer", "a first dielectric layer", "a second dielectric layer", "a fourth conductive layer". In light of the specification, the Examiner interprets the limitation as "four conductive layers are arranged between dielectric layers".

Claims 15-20 depend on claim 14.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Olsen et al.

Regarding claim 1, Olsen et al. disclose a stator coil system, comprising: an upper half-diamond coil (52 in Fig. 2) with first and second machined tips (inherent because the tips with slits to be form by punching or stamping machine); a lower half-diamond coil with third and fourth machined tip; a first mechanical-electrical connector (64) adapted to receive the first and third machined tips from said upper and lower half-diamond coils and mechanically and electrically interconnect the upper and lower half-diamond coils (Col. 4, lines 58-64); and a second mechanical-electrical connector adapted to receive the second and fourth machined tips from said upper and lower half-diamond coils and mechanically and electrically interconnect the upper and lower half-diamond coils.

Regarding claim 2, Olsen et al. also disclose a stator coil system wherein said upper and lower half-diamond coils include a plurality of conductor pairs, each conductor pair being at a different potential (Col. 4, lines 35-40).

Regarding claim 4, Olsen et al. also disclose a stator coil system wherein said first and second mechanical-electrical connectors include a plurality of conductive sections (a pair of partial turn 60) separated by at least one dielectric layer (air is an insulation layer), said conductive sections connected to each other through a strap conductor (64 as described in Col. 4, lines 60-65).

7. Claims 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Jegou et al.

Regarding claim 14, Jegu et al. also disclose a mechanical-electrical connector for successive coil loops of a sectioned interconnecting stator (abstract), comprising: a mechanical-electrical connector for successive coil loops of a sectioned interconnecting stator, comprising: a first conductive layer; a first dielectric layer below said first conductive layer; a second conductive layer below said first dielectric layer; a third conductive layer; a second dielectric layer below said third conductive layer; a fourth conductive layer below said second dielectric layer (Fig. 1 shows four conductive layers 52 are arranged between dielectric layers 53); an inner conductor (21) electrically joining said second and third conductive layers; an outer conductive jumper (22) electrically joining said first and fourth conductive layers; and running through each of said conductive layers, dielectric layers and inner conductor to secure said layers together.

Regarding claim 15, Jegu et al. also disclose a mechanical-electrical connector wherein each of said dielectric layers is larger than each of said conductive layers to prevent creep (as shown in Fig. 2, dielectric layer (53) is larger than conductive layers (52)).

Regarding claim 16, Jegu et al. also disclose a mechanical-electrical connector wherein each of said four conductive layers includes groove machined (grooves formed between conductive layer) therein adapted to accept a conductive tip from an external source.

Regarding claim 17, Jegu et al. also disclose a mechanical-electrical connector further comprising: a phase lead (3d) connected to said first conductive layer.

Regarding claim 18, Jego et al. also disclose a mechanical-electrical connector further comprising: an insulating tube (Fig. 4) around said bolt to insulate said bolt from said conductive layers.

Regarding claim 19, Jego et al. also disclose a mechanical-electrical connector further comprising: an insulating boot (23 and 24) formed around said and conductive layers.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. in view of Fujiwara et al.

Regarding claim 3, Olsen et al. show all limitations of the claimed invention except showing the stator coil system wherein the number of said coil pairs four.

However, Fujiwara et al. discloses the stator coil system wherein the number of said coil pairs is four (Fig. 5 shows four pairs 12a) for the purpose of providing an armature winding of a split core.

Since Olsen et al. and Fujiwara et al. are in the same field of endeavor, the purpose disclosed by Fujiwara et al. would have been recognized in the pertinent art of Olsen et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Olsen et al. by using four pair of coil for the stator coil system as taught by Fujiwara et al. for the purpose of providing an armature winding of a split core.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. in view of Jego et al.

Regarding claim 5, Olsen et al. show all limitations of the claimed invention except showing the stator coil system wherein said first mechanical-electrical connector includes a first bolt running therethrough and said second mechanical-electrical connector includes a second bolt running therethrough.

However, Jego et al. discloses the stator coil system wherein the mechanical-electrical connector (5 in Fig. 1) includes a bolt running therethrough for the purpose of facilitating the assembly of the coils.

Since Olsen et al. and Jego et al. are in the same field of endeavor, the purpose disclosed by Jego et al. would have been recognized in the pertinent art of Olsen et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Olsen et al. by using bolt for the connector so that said first mechanical-electrical connector includes a first bolt running therethrough and said second mechanical-electrical connector includes a second bolt running therethrough as taught by Jego et al. for the purpose of facilitating the assembly of the coils.



Regarding claim 6, the structure disclosed by Olsen et al., modified by Jego et al. would have said first and third machined tips are aligned and adapted to receive said first bolt, and said second and fourth machined tips are aligned and said second bolt.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jego et al. in view of Miller.

Regarding claim 20, Jego et al. show all limitations of the claimed invention except showing a mechanical-electrical connector the dielectric layers are made from G-10.

However, Miller discloses the motor structure wherein the rotor blocking is constructed from G10 epoxy-glass for the purpose of providing insulation function (abstract).

Since Jego et al. and Miller are in the same field of endeavor, the purpose disclosed by Miller would have been recognized in the pertinent art of Jego et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Jego et al. by using G10 epoxy-glass as a material for the dielectric layer as taught by Miller for the purpose of providing insulation function.

#### ***Allowable Subject Matter***

10. Claims 7-13 are objected to as being dependent upon a rejected base claim, but would be allowable if claim 7 is rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show a stator coil system as described in claim 1 wherein the first mechanical-electrical connector includes eight conductor sections which are interconnected through three conductive straps and an inner conductive block.

***Conclusion***

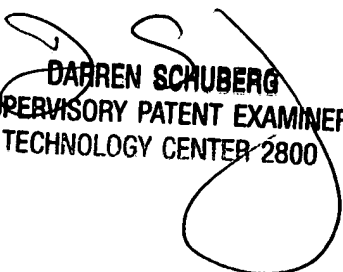
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

February 11, 2005

  
DARREN SCHUBERG  
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